SOUTH SAN JOAQION IRRIGATION DISTRICT
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May 29, 2008

Joe Karkoski
Chief, Irrigated Lands Regulatory Program
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, California 95670-6114

C.C.: Adam Laputz

Dear Mr. Karkoski:

RE: Central Valley Regional Water Quality Control Board Long-term Irrigated Lands Regulatory Program

South San Joaquin Irrigation District appreciates the opportunity to comment on the Long-term Irrigated Lands Regulatory Program.

We will start with comments directed at the presentation of scope and goals:
Question 1. Specific issues that should be considered in changing the irrigated lands definition to include operations where water is applied to produce crops (e.g., greenhouse operations and managed wetlands would no longer be included.)? Greenhouse operations could be considered Industrial if you would like to remove them from the program; they have more storm water runoff than other agricultural operations because there are more runways and compacted soil for potting plant growing or covered greenhouses that will displace water as would a building. Most Operations have a storm water basin to catch the runoff from excess watering of the potted plants, etc… [these are usually evaporation basins but I have seen lined basins where the water is pumped out for watering plants so that it is not wasted. But they are usually considered "Commercial Agricultural operations".

We have no comment on managed wetlands as there are none in our District.

Question 2. Issues that should be considered in expanding the irrigated lands regulatory program to include regulation of waste discharged to groundwater in addition to surface water.

Concerns with Groundwater Regulation.

We do not believe that the Board should be attempting to regulate groundwater through the Program. First, it is complete speculation to conclude that groundwater within our District has any impact on surface water. Next, even if it can be shown that groundwater has an impact on surface water, it would be impossible to detect the difference between impacts caused by subsurface drainage from surface runoff caused by a farmer pumping groundwater. The District would have no authority over either situation. Third, because of the general movement of groundwater in our District to the north, it is impossible to connect groundwater impacts to a particular property owner or even to a particular area. Fourth, the impact of surface irrigation on groundwater cannot be tied to a particular farmer, region, crop or time of year as impacts are highly variable. A farmer applying water by flood irrigation will cause different impacts than one using drip irrigation. There are differences based on soil types, crop types, groundwater levels, groundwater extraction rates, and drainage practices. Such impacts are quite

incapable of measurement. To impose a rule that would result in monitoring requirements or other restrictions in such highly variable situations would be entirely arbitrary.

Groundwater Monitoring Programs in the Central Valley 2008

Before the State Water Quality Control Board requires more information to establish a Central Valley Ground Water Database they should first organize the available data and then see where any further monitoring is needed. Several studies have already been completed to track ground water aquifers, salinity source information, soil analysis (percolation or non-percolation fields), pesticide areas of concern, Groundwater Management Zones, to mention a few.
Duplication of information, staff time constraints, budgeting, and actual authority to include a totally separate program into the Irrigated Lands Program should raise concerns about the management of any program that is still in the development process.

It would be reasonable to assume that any Groundwater Data obtained through the Irrigated Lands Program would be a duplication of effort of one of the existing eight programs. There has been limited discussion of how this data will be organized or made accessible to other organizations and be a benefit to the Long Term Goals for Groundwater Management in the Central Valley.

If Groundwater Monitoring is introduced into the Irrigated Lands Program there would then be (at least) nine Groundwater Monitoring Programs in the Central Valley. Unless the data is effectively assembled and analyzed, there will still not be a realistic Groundwater Database to use to make water quality decisions for future generations of water users in California.

Rather than looking for a new source of information, it would be appropriate for the CVRWQCB to gather the available information from the eight existing programs, designate files for each individual watershed throughout the Central Valley, the second step would be to document each watershed's information (data) into the appropriate township, GPS coordinates, or any other practical application, and the third step would be to make this new database available to any Public Agency or Governmental Agency. This would be a useful tool for the State Water Quality Control Board.

There are at least eight programs in place that would provide vast quantities of information to the CVRWQCB without adding Ground Water Monitoring Requirements to the Irrigated Lands Program. I have listed those programs that are accessible via the Internet.

To do the project right there is no clean and tidy solution, someone will have to roll up there sleeves and gather the information from the sources. Then it will take a talented team to; separate the data into watersheds, divide that watershed information into regions (GPS or Township and Range), then organize a directory that would access the data by any specific data inquiry.

1. U. S. Geological Survey NWIS Metadata
   (National Water Information System) 1899 - 2008
   Ground water: conductivity, alkalinity, salinity dissolved salts, nutrients (nitrate, phosphate, & nitrite), major organics, (sulfate, chloride, bicarbonate, carbonate, calcium, sodium).
   Access: http://waterdata.usgs.gov/nwis

2. U. S. Geological Survey NAWQA Metadata
   (National Water Quality Assessment Program) 1991 - 2001
   San Joaquin-Tulare Basin, Sacramento River Basin

8,100 wells, g-49,000 nutrient samples, and 31,000 pesticide samples.
Ground water: Parameters measured for salinity include: nitrate, phosphate, chloride, and conductivity. Most downloaded data comes with land use information.
Access: http://usgs.gov/nawqa

3. U. S. Environmental Protection Agency STORET Metadata
(STOrage and RETrieval database)1901 - 2008
Ground water: Parameters measured: conductivity, dissolved solids, nitrate, chloride, carbonate, sodium and calcium, salinity. Salinity measurements are based on conductivity and in parts per thousand. Total dissolved solids measurements are reported as sum of constituents, tons per day, electrical conductivity and lb/day/cfs/
Access: www.epa.gov/storet/dbtop.html.

4. California Department of Water Resources Water Data Library
(WDL) 1963 – 2008
Ground water: alkalinity, nitrate, nitrite, conductance, sulfate, phosphate, TDS, and chloride.
Access: www.wdl.water.ca/gov

5. U. S. Geological Survey GAMA Metadata
Ground-Water Ambient Monitoring & Assessment 2004 – 2010
Ground-Water Quality Monitoring Act of 2001 (Sections 10780 – 10782.3 of the Water Code); 116 identified priority basins in the state of California, 35 study units. In each study unit 60 – 120 public-supply wells are sampled.
Ground water: Chemical constitutes; major ions, trace elements, nutrients, volatile organic compounds, pesticides, and pharmaceuticals to define the quality of water in the ground-water basins.
Access: http://www.ca.water.usgs.gov/gama

6. California Department of Pesticide Regulation
California Code of Regulations (title 3, Food and Agriculture)
Division 6, Pesticides and Pest Control operations
Chapter 4. Environmental Protection
Subchapter 1. Groundwater
Article 1. Pesticide Contamination Prevention
Note: Groundwater sampling has been done since 1970's.
The Pesticide Contamination Prevention Act (AB 2021) was initiated in 1986.
New Regulations took affect in the spring of 2004.

a. California Department of Food and Agriculture, Sampling for pesticide Residues in California Well Water, 1986 Well inventory Data Base.
b. Cal EPA, Department of Pesticide Regulation, Sampling for Pesticide Residues in California Well Water, 1994 Update, Well Inventory Data Base.
c. California Department of Pesticide Regulation,
Ground Water Protection List Monitoring (GWPL)
GWPL Studies have been conducted every year since 1991 featuring one to six constitutes each year in these reports.
Access: http:// www.cdpr.ca.gov/docs/emon/grndwtr/list_mon.htm
Contact: Mark Pepple – mpepple@cdpr.ca.gov
Tele: (916) 324-4086

7. California Department of Public Health
Drinking Water Source Assessment and Protection (DWSAP) Program
34 Counties, the California Rural Water Association, plus over 500 Water Systems throughout the State of California. 1997 – 2008
14,326 Ground water Sources, 16,152 drinking water sources
And a total of 7,7441 Water Systems (7,543 Public Water Systems)
Access: http://www.cdph.ca.gov/certlic/drinkingwater/Pages/DWSAP.aspx

8. State of California Department of Water Resources
Division of Planning and Local Assistance
Integrated Water Resources Information System (IWRIS)
IRWIS went live on May 2, 2008
Access Groundwater Management Plans and bulletin 118 groundwater basin descriptions.
User interface contains twenty-one Map Tools and uses standard buttons in GIS.
Access: http://www.water.ca.gov/iwris/

Question 3. The long-term irrigated lands regulatory program may allow degradation of ground and surface waters up to Basin Plan objectives.
The District is not aware of any. The water quality goals of the state have many regulations for specific TMDL's and specific water bodies have been listed in the *303D List*. To make any recommendations one would have to look at each specific water body to see what regulations are already being enforced.

Question 4. What types of management practices or potential mitigation measures should be considered when evaluating how to protect ground and surface waters? Currently the Coalition Groups are diligently working on Best management practices for an expanded list of constituents throughout the CVRWQCB. There will be a significant amount of data to be utilized from these efforts. It would be advantageous for the CVRWQCB to have staff compile these BMP's (Management Plans) into some formula that would be accessible to everyone working with water quality issues.

Questions 5 & 6. Alternative approaches for achieving Program Goals.
The CVRWQCB has several water quality management programs in place; Construction Storm Water Management Plans, Irrigated Lands Program, 2007 Milk Cow Dairy Program, Municipal Waste Discharge Requirements (WDR's), etc… These should be the overall Water Quality Programs and it would be very hard to separate each program into sub-programs by geography, climate, commodity, soil type, etc… for a countless number of reasons as described in the answer to question 2 above.

Questions 7, 8, & 9. Factors that will be considered in Developing and Evaluating Program Alternatives: Specific costs / economic concerns will be a major factor in how this Long-term Irrigated Lands Program is accepted throughout the CVRWQCB.
There is a growing concern from the Agricultural Community and land owners who have contacted this department within the last few months. The new Coalition Irrigated Lands Program is expected to cost land owners $2.75 to $ 3.50 per acre this year. The land owners do not see any benefit from this expense. Consider the average 120 acre almond orchard (family owned farm) is spending $ 420.00 per year for membership to a Coalition and they do not even drain any water from their field. Over the years they have leveled and developed their fields and provided roadways around their property that are solid barriers raised high enough to hold eight to twelve inches of water in their fields, there is good soil penetration and water is soaked into the soil within a reasonable amount of time. This same farm has developed water conservation measures by installing sprinkler or drip irrigation to better deliver the water when it is needed by the tree crop. By irrigating in this method there is no deep penetration of water into the ground water table [the water is either; taken up into the plant through it's root system, is

evaporated through natural transpiration, or is bound to the soil particles]. This Family owned farm belongs to the Coalition to be protected under their umbrella and for no other reason than that. This is not a single situation; it represents approximately 45,000 acres in our District alone.
The question is; why do these types of farming operations need to be included in the "Discharges from Irrigated Lands Program or the Groundwater Protection Program or the Long Term Irrigated Lands Regulatory Program?

In one of the handouts Irrigated Lands are currently defined as: Lands where water is applied to produce crops including land planted to row, vineyard, pasture, field, and tree crops, commercial nurseries, nursery stock production, managed wetlands, rice production, greenhouse operations with permeable floors. Each of these operations have to make a profit to stay in business, crops may change as economic conditions change, but the bottom line is that there is no stimulus to waste any pesticides, fertilizers, or any fuel, time and energy that is not part of the economics of growing each crop. So anything that leaves the field, anything that is not absorbed by the crop is wasted profit.
We are seeing the first repercussions of drought this year with some Irrigation Districts actually limiting the total amount of water allotment per acre for each parcel of land. It is very doubtful that there will be much if any wasted water leaving any irrigated property in the state this year.

The CVRWQCB must take a realistic look at fairness for all growing operations, irrigated lands, and provide a fair and reasonable approach to locate the point sources of each pollutant within the region.

There must be a consistent way to separate Irrigated Lands that do have runoff and those that can never have runoff.

Groundwater regulations should be excluded from the Long-term Irrigated Lands Regulatory program.

The EIR should address each watershed within the CVRWQCB by irrigation methods & practices.

The EIR should mention that water quality in this program is influenced by: Municipal discharges, Natural contaminants, Climate changes, Water availability and any other source that influences water quality.

If you have any questions or concerns regarding this document, please contact me at (209)-993-7971 or e-mail at jima@ssjid.com.

Sincerely,

Jim Atherstone

Jim Atherstone
Environmental Compliance & Safety Officer
South San Joaquin Irrigation District

[Electronically submitted to: awlaputz@waterboards.ca.gov]